



Omauyelele

**CUVE** integrated water  
resources management  
**waters**

# Oku hakela omeva odula moNooli-upokati yaNamibia

## Eshongo

Namibia osho oshilongo sha kukuta shili mouninginino wa Africa. OCuvelai-Etosha Basin oili mo Nooli-upokati waNamibia noya kumwa unene kovanhu o850,000, hanga etata loshiwana shaNamibia omo veli. Odula yomoshitopolwa ohai loko unene oku dja puKotooba fiyo oMaal-itsa. Ouhapu wodula aishe yokomudo oufike po 470 mm. Ohaku kala kwa kukuta okudja puApi-ili fiyo oSepetemba. Outekinika woku hakela omeva odula owa etwa opo pakale pena omeva odula nopefimbo yoo kukutu, sho shi kaleke oikunino tai longo efimbo alishe. Eshongo moku etapo oku hakela omeva odula moshitopolwa: oku wilika nawa ovanafaalama vopetameko nghene vena oku tunga osho yoo eshiivo lopautekinika nounongo wekalekepo. Lwaxuun- inwa, omauwa nekalepo loikunino oina oku ulikwa pomidingonoko, pomahango oo elipo noku tulwa moilonga taku longifwa oilongi- fomwa oyo tai monika pomudingonoko.

## Omukalo

Oihakelo yomeva odula oya tungwa momukun- da Epyeshona popepi no Oshakati okudja modu- la yo 2009. Pomafimbo maxupi odula, omeva ohaa hakelwa oku dilila pombada yeenduda noyeenhele dikwao da tungwa mokaungulita, oo taa tuvikilwa meetenga nomoilambo yee “ponds”. Omeva oo a hakelwa oena ongushu ili nawa no a lalakanenenwa oikunino, ashike otaa dulu yoo a longifwe oku kosha, oku teleka nokunuwa koimuna.

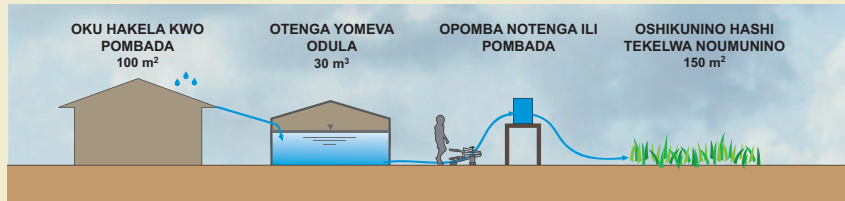
Oikunino oya tungwa popepi noituvikilo yome- va. Omukalo oo hau kwata nawa omeva woumunino ohau longo kopomba yo keemhadi, sheli kwatelela kounene wonhele oyo tai tekelwa. Onga oshitopolwa shoku pashula yoo oshiwana oprojeka deula ovanhu vopomudingonoko, vad- ule oku tunga, oku longa noku kalekapo omatungo. Shimwe vali, ovanhu ove lihonga oku lima noku kalekapo oikunino opo va mone oiuyemo tai di mwaashi va kuna. CuveWaters okwa ninga omalolelo avala opautekinika oku hakela omeva odula: omukalo oo wopamaumbo osho yoo wopashiwana.



Oihakeli yomeva odula momukunda Epyeshona: Omukalo wopamaumbo (pombada) nomukalo wopashiwana (pedu)

## Omukalo wopamaumbo nowopashiwana

Ouhapu womeva odula efike pee 30 m<sup>3</sup> okwa hakelwa oku dja pombada yeumbo limwe nokwa tuvikilwa meetenga odo dili kombada yedu. Omeva aa ohaa longifwa oku tekela oikunino ishona ile eumbo litwima (tala mefano lili pombada).



Omukalo wopashiwana ouna omaumbo haa longele kumwe atano. Oena otenga yokoshi yedu, o“pond” ya tuvikwa, eumbo litwima neshala loshikunino shapatuluka. Eumbo litwima noitopolwa yoshikunino osho shili pondje ohai longele kumwe, shahala kutya ovanafaalama ohava topolelafana oilonga oshoyoo eshi tashi dimo (tala pefano lili pedu).



Shimwe vali ovanafaalama ovena oumhungu vavo omo hava dulu okulya eshi tashi dimo ile valandife oiimati noikwambi-di ei ya djamo. Omauva eumbo litwima oku keelela etukepo lomeva, oupyu, noku amena oimeno komhepo nokoupuka.

## Osho sha monikapo

- ▶ Oikwakutungwaa moNooli-upokati wa Namibia oya ulika omhito iwa yoku hakela omeva odula, okudja pombada yomatungo opaumwene noopashiwana.
- ▶ Omavalulo nekalekepo okwa u lika kutya pandodo yopamaumbo eetenga odo dalongwa mosameende yo“ferroce” otadi wapalele, omanga eumbo litwima noilambo yeeponds otai wapalele pamukalo wopamuhanga.
- ▶ Konyala oilongifo aishe yokutunga otai hangika meefitola doitungifo moshitopolwa.
- ▶ Eetenga, eumbo litwima nomukalo oo woku tekela otai dulu oku tungwa kovanhu vopashi-topolwa tava talelwa kwaau a deulwa.

Oludi londado	Omukalo wopamaumbo		Omukalo wopashiwana	
	Ondado yoilongifo keshe mo planta	Ondado yokomesho	Ondado yoilongifo keshe mmo	Ondad yokomesho
<b>Osho sha longifwa mokutunga</b>				
Otenga yo 30 m <sup>3</sup> , omikangha, ominino dopedu	N\$ 12,000-18,000	N\$ 9,000		
Oshihakelo shomeva shopedu, otenga yokoshi yedu yo 120 m <sup>3</sup> , opond yativikwa nonete yo 80 m <sup>3</sup> , omikangha, ominino dopedu)			N\$ 110,000	N\$ 82,000
Oshikunino (90 m <sup>2</sup> ), omukalo wokutekela woumunino	N\$ 2,700	N\$ 2,000		
Oshikunino (750 m <sup>2</sup> ), eumbo litwima (160 m <sup>2</sup> ), oumunino vokutekewla			N\$ 40,000	N\$ 30,000
<b>Oilonga noku pangela keshe kodula</b>				
Eetenga no maluumbo	N\$ 100	N\$ 75	N\$ 1,000	N\$ 750
Oshikunino (omukalo wokutekela woumunino, eembuto, oushoshu nomiti doupuka)	N\$ 500	N\$ 375	N\$ 2,000	N\$ 1,500

Omawapaleko ongaashi omifya, oluumbo noumunino vokutekela. Ei inai kwatelamo oimaliwa yomawapalekululo omatungo, ngaashi oku shunapo oipeleki pombada yeumbo litwima (konima yeedula 5 ) ile ominino doku tekela. Omolwa amatomhelo a yooloka, etulo moilonga ola pula oshimaliwa shihapu mokufaafanifa nomavalulo okomesho. Omavalulo okomesho oa tengeneka kutya oilongifo yoku tunga (mwa kwa telwa ewapalekululo) nekalekepo otai ka landwa momuvalu muhapu pefimbo limwe. Omavalulo okomesho oa ulika kutya eendado odadi dulu oku shunifwa pedu noshitine. Omawapalekululo a ningwa paemhito adishe oa tengeneka kutya oilonga yekalekepo N\$1,000 ≈ € 77 (May 2015).

## Omauwa no Mashongo

### Omauwa

- ▶ Oku likola noku tuvikila omeva ohaku xwepopeke onghalo yomepo nohaku pitike ovanhu va kune oikwambidi efimbo alishe.
- ▶ Okulya noukolele woshiwana owa xwepopala.
- ▶ Ounongo kombinga yoku tunga, ounafaalama noku tekela owaxuma komesho.
- ▶ Opa holoka eemhito doilonga shaashi oihakeli ikwao yomeva oya tungwa kovanhu va deulwa pefimbo loprojeka.
- ▶ Ovaneumbo ova mona yoo oiuyemo ifike lwopo N\$12,000 keshe kodula.
- ▶ Ekalekepo, oikunino, oilongifo, eembuto nosho tuu otai dulu oku futwa koimaliwa oyo ta i di movakwashiwana.



Tava tungu otenga yokoshi yedu yoku hakela omeva odula

### Eshi sha pumbiwa nomashongo

- ▶ Oimaliwa oyo ya shangwa apa oyoilongifo ashike. Ikwao ya wedwapo pefimbo letulo moi-longa yoprojeka oyo: vanailonga, ekalekepo loku tunga, oilongifo, omadeulo moikwa kunino mokukalekapo oku tunga nekalekepo longudu.
- ▶ Epangelo ola pumbwa li vatele pashimaliwa shoku tunga petameko nosho kuwapalekulula.
- ▶ Eprojeka tadi ke uya kom esho dinasha noku hakela omeva odula odina oku kwatakanifwa neeveta da Namibia tadi ka totwa.
- ▶ Oupyakadi woprojeka tai dopa molwa omaupyakadi mongudu, okuha kwata nanwa oinima, eedjo dixupi doimaliwa ile omaupyakadi manini, opauteknika.



Tava likola ondongu momukunda utwima Epyeshona

## Osho sha enda nawa kwaashi sha tulwa moilonga

### Etameko

- ▶ Omhumbwe yomeva a wedwapo oku tekela
- ▶ Ekalekepo lehalo lovakwashiwana va tunge noku longifa eetenga doku hakela omeva odula noikunino

### Oshiwana nomutungilo/omufolomo

- ▶ Omadeulo mokukalekapo ongudu: eemhango doilonga yelifa, omafimbo oku longa, nghee una oku shiivifa oilikolomwa nekalekepo lomatungo
- ▶ Etulomumwe loomeme nootate veedula da yooloka ohali kwa shilipaleke eyokomesho loilonga
- ▶ Ovakainhu tava longifa omhito va mone oimaliwa noku xumifa komesho onunongo wavo, tava kwafelwa opo va kale noshisho
- ▶ Ekwatafano noilyo yongudu yopamudingonoko melaka lavo
- ▶ Oshinano shixupi shoku ya komaumbo avo noko kovalandi

- ▶ Ewiliko longudu moilonga aishe oule weedula nhano

### Outekinika

- ▶ Ekwafelo kombinga yokushanga omambo noku shiivifa oilikolomwa
- ▶ Omadeulo kombinga younafaalama: nghee oimeno hai dala oku kelela oupuka, oku tunga omaluumbo nekwatelepo loinima efiku keshe
- ▶ Omadeulo mekwatelepo loilongifo opo ku keelwe omawapalekululo akula
- ▶ Omavatelo adja pondje opaunafaalama nosho yoo opauteknika
- ▶ Eedjo domeva da wedwapo, ku kwa shilipalekwe kutya oikunino otai longo nawa ngee ku hena odula
- ▶ Ongushu yedu yawana
- ▶ Oluumbo lakola tali a mene koimuna (> 1.5 m)
- ▶ Omhito yoku mona oilongifo moshitopolwa

## Okamhunda kokuhakela omeva odula no efundja

Komauelele a wedwapo oprojeka oya etapo omhunda yo ku hakela omeva odula no efundja. Omhunda oya lalakanenenwa omahangano no-vanhu koohandimwe ovo vena ohokwe yoku etapo eprojeka doku hakela omeva odula no

efundja. Oina yoo omauelele kombinga yetulo moilonga osho yoo omambo enasha noku tunga omaludi aeshe eetenga no kutekela. Omhunda ei koCuveWaters otai dulu monika yoo kepandja eli: <http://www.cuvewaters.net/Toolkits.112.0.html>

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